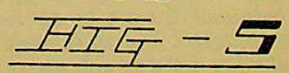


$$\begin{array}{r} 238 \\ \times 278 \\ \hline 416 \\ \hline 60 \end{array}$$


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Fans for Sewing Machines and the Like

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1 Claim

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This invention relates to Improvements in Fans for Sewing Machines and the Like, as described in the present specification and illustrated in the accompanying drawings that form a part of the same.

The invention consists essentially of the novel features of construction as pointed out broadly and specifically in the claims for novelty following a description containing an explanation in detail of an acceptable form of the invention.

The objects of the invention are to devise a fan which may be easily mounted on a sewing machine and operated by the same; to eliminate the necessity of providing an individual fan motor when used with a sewing machine; to increase the efficiency of those in the garment and cloth industries during warm weather; to speed up the production of articles in which sewing machines and the like are used by increasing the comfort of those employed during summer temperatures; to encourage continuous use of sewing machines and the like during warm weather so as to keep the fan on same in operation; to furnish a fan for sewing machines and the like that will be simple in construction and inexpensive to manufacture; and generally to provide a fan for sewing machines and the like, which will be durable and efficient for its purpose.

In the drawings:

Figure 1 is a rear view of a sewing machine showing the fan mounted thereon.

Figure 2 is a front view of the fan and mounting bracket therefor.

Figure 3 is a side view of Figure 2.

Figure 4 is a perspective detail showing the driving mechanism for the fan which engages the fly wheel of the sewing machine.

Figure 5 is a rear view of the fan showing part of the bracket for same.

Like numerals of reference indicate corresponding parts in the various figures.

The invention as hereinafter described is particularly adapted for use with sewing machines, however, it will be readily understood, that with slight modifications, the same could be applied to any other machine with which an operator is required.

Referring to the drawings, the air circulating fan as indicated by the numeral 10 is mounted on the sewing machine 11 and adapted to be operated by the latter. This air circulating fan 10 consists of the fan 12 comprising a plurality of fan blades 13 which are integral with one another and have a hub 14 fixedly secured in the centre thereof.

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The spindle 15 is fixed in the hub 14 and rotatably mounted in the bushing 16, which, in turn, is mounted in the vertical bracket 17. The pulley 18 is fixedly secured on the end of the spindle 15 to the rear of the bracket 17 and is suitably connected to the sewing machine so as to operate the fan 12. The fan guard 19 is of a wire formation and suitably mounted on the front portion of the bracket 17 towards the upper end thereof.

The upper portion of the bracket 17 is of an inverted U-shaped formation and the bushing 16 extends through the sides thereof. The bracket 17 extends vertically downward from the U-shaped portion of same on the forward side thereof. This bracket 17 is made from flat strip material and the central portion thereof is twisted so that the lower portion of the bracket is in a longitudinal plane while the upper portion thereof is in a lateral plane.

The clamp 20 is suitably secured to the lower portion of the bracket 17 and the central portion of the former extends outward from the latter in an arcuate manner. This clamp 20 is adapted to substantially secure the bracket 17 to the horizontal arm 21 which operates the presser foot of the sewing machine.

The drive mechanism 22 for the fan comprises a horizontal bracket 23 which is formed from a flat strip of material and suitably bent at the ends thereof to provide a somewhat U-shaped bracket. The latter consists of a body portion 24 having the flanges 25 and 26 extending outward therefrom at right angles thereto.

The support strap 27 is fixedly secured to the body portion 24 of the horizontal bracket 23 and extends upward therefrom. The upper portion of the support strap has the holes 28 therethrough so as to provide an adjustable means of securing the strap to the sewing machine 11. The tension cord 29 is fixedly secured to the outer end of the body portion 24 and has a hook 30 secured to the free end thereof. This hook 30 is adapted to engage in an existing oil hole in the top of the sewing machine.

The spindle or shaft 31 is rotatably mounted in the flanges 25 and 26 which extend outward from the body portion 24 of the horizontal bracket 23. The friction wheel 32 is fixedly mounted on the outer end of the spindle 31 and adapted to engage the hand wheel 33 on the sewing machine. The ring 34 is fixedly secured to the spindle 31 on the inner side of the flange 25 and in co-operation with the friction wheel 32 retains this spindle in position with respect to the horizontal bracket 23.

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The pulley 35 is fixedly mounted on the inner end of the spindle 31 and is adapted to be connected to the pulley 18 by the belt or cord 36, thus providing a means of operating the fan 12.

In the operation of the invention, the rotation of the hand wheel 33 on the sewing machine drives the friction wheel 32 which, in turn, transmits motion through the spindle 31 to the pulley 35. The belt or cord 36 connecting the pulleys 35 and 18 drives the spindle 15 on which the fan blades 13 are fixedly mounted thus rotating the fan.

It will be seen from the foregoing that the air circulating fan, which is directed on the operation of the sewing machine, will circulate air during the operation of the latter and will cease upon stoppage of the same.

What I claim is:

In fans for sewing machines and the like, an air circulating fan, a vertical bracket secured to the sewing machine and extending upward therefrom, the upper portion of said bracket being of a U-shaped formation, a spindle rotatably supported in the U-shaped formation of said bracket, said air circulating fan comprising a plurality of fan

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blades, a hub joining each of said fan blades and being fixedly secured on said spindle, a pulley fixedly mounted on said spindle towards the rear end thereof, a drive mechanism suitably mounted on the sewing machine, a shaft rotatably mounted in said drive mechanism, a friction wheel secured on said shaft and adapted to engage the hand wheel of the sewing machine, a pulley on said shaft of said drive mechanism, and means connecting said pulley on said drive mechanism with said pulley on said spindle of said air circulating fan.

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